GETTING STARTED GUIDE

Nomad® 900 Series handheld computer

August 2011

Limited Warranty & Liability Limitations

This product is limited warranted against defects in materials and workmanship for twelve (12) months from the original date of purchase. Nomad accessories and peripherals are limited warranted against defects in materials and workmanship for ninety (90) days from the original date of purchase. If notice is received of such defects during the limited warranty period, the proven defective product(s) will either be repaired or replaced, at the manufacturer's option. Replacement products may be either new or like new.

The manufacturer does not warrant that the operation of the products will be uninterrupted or error free. If the product is not, within a reasonable time, repaired or replaced to a condition as limited warranted, the customer will be entitled to a refund of the purchase price upon prompt return of the product.

Limited warranty does not apply to defects resulting from (a) improper or inadequate maintenance or calibration, (b) software, interfacing, parts, or supplies not supplied by manufacturer, (c) unauthorized modification, or misuse, (d) operation outside of the published environmental specifications for the product, or (e) physical damage due to external causes, including accident, abuse, misuse or problems with electrical power. Water damage caused by improper installation of the Expansion Caps or I/O Boots is not covered by warranty. Removal of the back case voids the limited warranty. There are important seals that will break and the Nomad will no longer be waterproof.

To the extent allowed by local law, the above limited warranties are exclusive and no other warranty or condition, whether written or oral, is expressed or implied, specifically disclaiming any implied warranties or conditions of merchantability, satisfactory quality, and fitness for a particular purpose.

To the extent allowed by local law, the remedies in this limited warranty statement are the customer's sole and exclusive remedies. Except as indicated above, in no event will the manufacturer or its suppliers be liable for loss of data or for direct, special, incidental, consequential (including lost profit or data), or other damage, whether based in contract, tort, or otherwise.

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Welcome

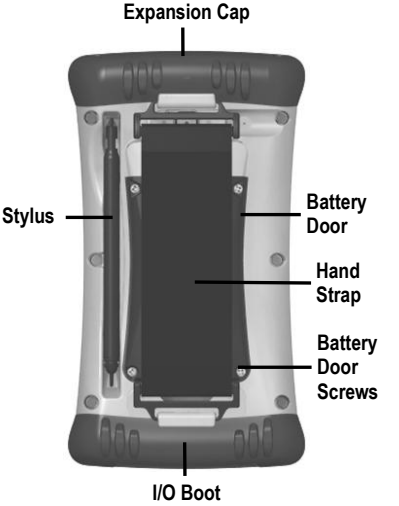
Congratulations on your purchase of the Nomad® Handheld Computer, the most powerful and advanced handheld computer available on the market today. Its rugged design allows you to work in harsh outdoor environments. You can operate your unit in blazing heat, subzero cold, driving rain or dusty job sites – places you could not take a consumer-grade handheld computer.

NOTE: Not all the features discussed in this manual will apply to every unit, as some of the features are offered as options. If the feature described does not apply to your unit, please disregard that section.

Device Hardware

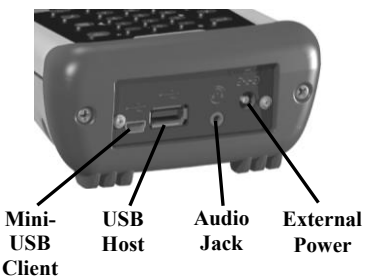
Front View
Numeric Data Keypad

Back View
with hand strap

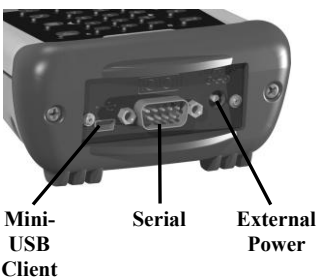


*See settings for assignable application buttons (keys)

Bottom View
USB I/O Boot



Bottom View
Serial I/O Boot



WWAN Option

Expansion Cap (GPS Antenna)

Second USB host Option

900LD Model

Extended Cap Option

Sold as an Accessory

Top View

Standard Expansion Cap

Top View

Camera & Scanner Expansion Cap

Camera only

Scanner & Camera

An Extended Cap, sold as an accessory, can be used for oversized CompactFlash (CF) and Secure Digital (SD) cards.

NOTE: Be sure to read the warranty and safety information in this manual prior to using your unit.

Unit Setup

1. Install the battery

The Lithium-Ion (Li-Ion) battery and battery cover are shipped detached from the unit. Insert the battery into the compartment so the connectors on the battery mate with the pins in the battery compartment. Press firmly. Place the battery door over the battery, with the flat side of the battery door at the top.

Remove the rubber cap from the end of the stylus to expose a Philips screwdriver, or use a small #1 Philips head screwdriver to finger-tighten the four screws in the battery door.

NOTE: **DO NOT** use the screwdriver part of the stylus on the touchscreen or it will scratch your screen. Only use the spring-tip end of the stylus.

IMPORTANT: Fully charge the battery once it's installed in the unit. The battery gauge may not be accurate until it has been fully charged at least one time, which should take approximately 4 ½ hours. The battery LED (right side of unit) will turn green once it's fully charged.

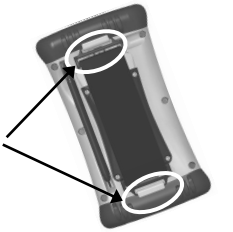
2. Charge the battery

The power supply that ships with your unit has four international plugs that fit almost every electrical outlet in the world. Connect the appropriate plug to the power cord and attach the power supply. Plug into an electrical outlet and plug the barrel end of the power supply into the unit.

Warning! Be sure to only use the power supply included with your unit. Use of other adapters may void the product warranty.

3. Attach the hand strap

Attach the hand strap to the back case, as shown.



4. Apply the screen protector

To keep the touchscreen clean and protected, apply the screen protector following the instructions provided in the screen protector package. Unprotected screens become scratched and scuffed over time. Screen protectors extend the life of the display by providing a protective and replaceable barrier between abrasive grit and the surface of the display. It is recommended to replace the screen protector every 2 months, or more often if heavily used.

Screen damage associated with not using a screen protector, not using the approved screen protector or failure to follow the instructions for installation may void the product warranty.

5. Turning your unit on and off

The unit should boot up when the battery is installed. If not, press and release the green **Power** key on the keypad. To turn your unit off, press and release the **Power** key again.

One of the most convenient features of your unit is "suspend/resume". There is no waiting for the unit to boot up every time it is turned on. (It does not occur on the first boot-up.)

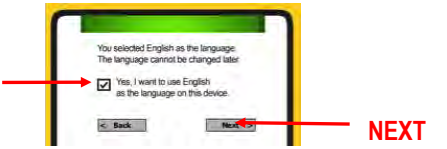
6. Language selection

IMPORTANT: Carefully choose the correct language because all other languages are removed after this selection. Contact technical support if the wrong language was selected.

The first time the unit is turned on or if the firmware is re-loaded, you may need to select the desired language.

1. Use the up or down arrows to highlight the language desired and press **Enter** to select it. (The touchscreen is not enabled yet).

2. Use the up or down arrows to highlight the checkbox.
3. Press **Enter** to place a checkmark in the box for "Yes".


You selected English as the language.
The language cannot be changed later.
Yes, I want to use English as the language on this device.
< Back
Next >
NEXT

4. Use the up or down arrows to highlight **NEXT** and press **Enter**.
5. Wait while your unit is being configured to the chosen language. It will restart when finished.

NOTE: Only Microsoft applications and messages will be translated into languages other than English. All other error messages, notifications and other applications may appear in English.

7. Align screen

When the unit first turns on, the message —Taphte screen to set up your Windows Mobile-based device" will appear.

The align screen message will display a series of targets to tap in sequence on the screen. Use the stylus to tap the targets firmly and accurately. Sometimes you need to repeat the alignment procedure more than once to provide a satisfactory alignment.

8. Location – time zone

Select your time zone location, set the time and date to the correct values and tap **Next**.

9. Password – lock (optional)

You do not have to provide a password unless you are concerned about unauthorized use. To eliminate using a password, tap **Skip**.

If you opt for password protection the password must be entered every time the unit is turned on or the **Power** key is pressed to resume operation.

WARNING: BE CERTAIN TO REMEMBER THE PASSWORD. The only way to recover from a forgotten password is to perform a Clean Boot and you will LOSE all application software, licenses, settings and data on your unit. See page 17 on how to perform a Clean Boot.

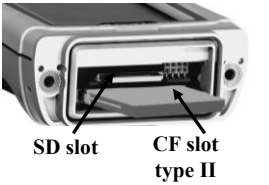
10. Using the expansion ports

To access the expansion ports, use the Philips screwdriver end of the stylus or a small #1 Philips head screwdriver to rotate the two quarter-turn fasteners counter-clockwise and remove the Expansion Cap.

Under the Expansion Cap is a Secure Digital (SD) expansion slot. Depending upon the configuration of your unit, it may contain a

CompactFlash (CF) type II slot, USB port, a camera and/or a scanner. The scanner and camera units have a clear window in the cap.

Gently insert cards into the slot and release; the card should catch in the slot. Make sure the front of the card faces the display side of the unit. Push the cards in straight, never at an angle or forced.



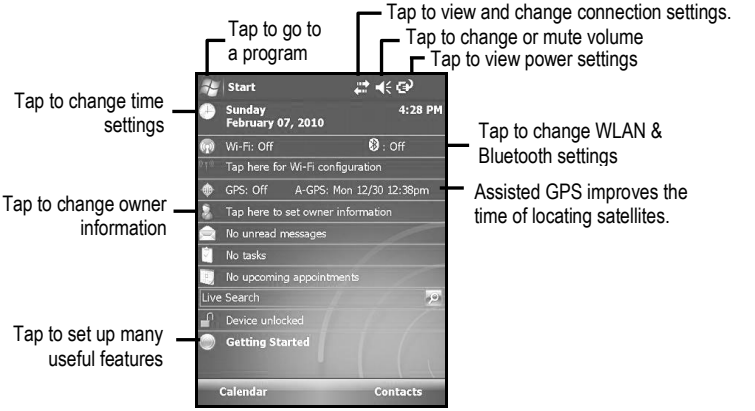
To eject an SD card, gently press the top of the card to release it. To eject a CF card, press the eject button next to the CF card.

There may be a foam bumper inside the expansion cap. When present, SD cards will be retained in 900B and 900L units when dropped within the product specification. On the LD unit, only USB storage devices that are 1.75 inches long are supported in drop. USB devices that are longer than 1.75 inches may reduce GPS performance.

NOTE: DO NOT use the unit without reattaching the cap and the boot. The unit is NOT sealed when the cap or boot is off and water damage can occur, possibly voiding the warranty.

11. The Today Screen

The Today screen provides information that you need for the day. Tap an item to view or edit details. To customize which items are shown on the Today screen, tap **Start / Settings / Today / Items**.



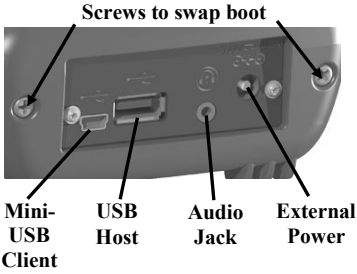
12. Getting Started

The Getting Started menu on the Today screen has a number of helpful features in setting up your unit. The Getting Started icon can be removed from the Today screen, if desired.

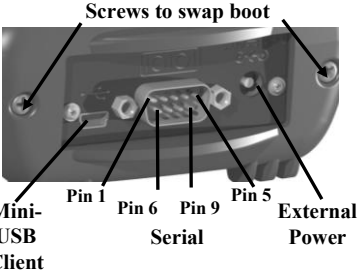
13. I/O Boots

There are two types of boots available. The boots can be swapped by loosening the screws pointed out in the picture below.

USB I/O Boot



Serial I/O Boot



Both boots have a mini-USB client that uses a standard USB cable (included with the unit). The mini-USB port can be used to connect to a personal computer (PC).

USB I/O Boot: This boot has a mini-USB client, a USB host port (to connect to USB client devices) and an audio jack that is wired for a headset with a mono speaker and microphone combination. (It is not for stereo headsets.)

NOTE: Many USB host peripheral devices supported by personal computers (Microsoft Windows XP®, Microsoft Vista®, Microsoft Windows 7®, etc.) are **not** supported by this unit. Mass storage devices (e.g. memory drives) and USB Human Interface Devices (HID) (e.g. keyboards) are supported. Before purchasing a USB peripheral, check with the manufacturer to ensure that it will operate with one of these natively supported USB classes. Some devices have no applicability in Windows Mobile. For example, mice do not make sense to use with your unit because it is designed to be touchscreen or keypad operated.

Serial I/O Boot: This boot has a mini-USB client and an RS-232 connector for use with serial devices. COM1 is always reserved in software for the 9-pin port, even if you don't have a unit with a serial boot.

Working with the Unit and the Battery

Battery life: The Lithium-Ion (Li-Ion) battery life is dependent upon the application and operating environment.

Tips for extending the battery life:

- ***Keypad backlight*:** The default is OFF. Using this backlight could reduce your battery life by up to 25%. For information on changing the backlight settings, see page 20.
- ***Display backlight*:** Tap **Start / Settings / System / Backlight** to minimize the amount of time the backlight stays on and dim it to only as bright as required to view the display.
- ***Wi-Fi, Bluetooth, camera, or barcode scanner***: If your unit comes with any of these options installed, use ONLY when necessary. Turn off when not needed. Minimize the Flash intensity and the use of the flashlight.
- ***Cold temperatures***: Keep the unit as warm as possible. If feasible, keep it inside your coat or a vehicle when not in use.
- ***GPS***: Ensure that the GPS-aware applications that communicate with the GPS are closed when not in use. The Today screen indicates if the GPS is running.
- ***Expansion ports***: Select low-power consumption CF and SD cards and use them only when necessary.
- ***Auto features***: Tap **Start / Settings / System / Power / Advanced.** To conserve battery power, specify your unit to turn off in a short time if not in use.

Other factors that may have some impact on battery life include heavy usage of the Bluetooth radio and heavy processing by the CPU, but these factors are typically less significant.

Charging the battery: The battery can be charged in the unit or apart from the unit with an external battery charger (sold separately, as an accessory). Connect the plug for your country to the power cord and attach to the power supply. Plug into an electrical outlet and plug the barrel end of the power supply into the unit. The unit will be charged in about 4.5 hours.

A full charge is indicated by the battery LED (right side of the unit) turning green. The recommended temperature range for charging is between +32 °F and +113 °F (0 °C and +45 °C). If the battery temperature is outside of this range, the battery will not charge.

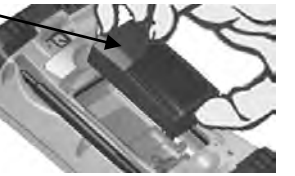
Warning! Be sure to only use the power supply included with your unit. Use of other adapters may void the product warranty.

Changing the battery: The unit was designed to be able to change the battery quickly without resetting it. The unit saves enough power (in Replace Battery mode) that if you swap the battery within approximately one minute, it will not trigger a reset.

WARNING: If the saved power runs out before the new battery is installed, the unit will reset. This will not impact saved data, programs or configuration, however unsaved data will be lost and the time settings will need to be reset.

To change a battery, perform the following steps:

1. Close open applications and save data in case the battery exchange takes too long.
2. Remove the hand strap from the unit.
3. Enter the **Replace Battery** mode (ensures that alarms will not wake up the unit while changing the battery). Press and hold the **Power** key and tap **Replace Battery**. See page 16.
4. Use the supplied stylus or a small #1 Philips head screwdriver to loosen the four screws in the battery door.
5. Remove the battery from the unit.
6. Quickly insert the replacement battery onto the unit.
7. Place the battery door over the battery, with the flat side of the battery door at the top of the unit. Use the stylus or screwdriver to finger-tighten the four screws.
8. Replace the hand strap.
9. Turn on the unit to resume operation.



Calibrating the battery: The battery has an internal gauge that provides an estimate of the amount of energy in the battery as it charges and discharges. If your battery is showing inaccuracy in the power gauge or large jumps in capacity, (i.e. the power is reading 50% and goes dead shortly thereafter) it may need calibration.

Tap **Start / Settings / System / Power / Calibration** to see if the message reads *Calibration recommended* or *Calibration not necessary*. If calibration is recommended or the battery is reporting inaccurately, perform the following:

1. Plug in the power supply. The unit MUST stay plugged in during the calibration or you may need to restart the process.
2. Ensure the temperature is between +32 °F and +113 °F (0 °C and +45 °C) while charging.
3. Tap **Start Calibration.**
4. During the calibration process, the **Power** key is disabled temporarily and the backlight is turned up to 100%.

It takes up to 25 hours to complete the calibration. When finished, a notification will state *Calibration is complete*. It is recommended to **not use your unit during the calibration process**. To stop the calibration process, tap **Start / Settings / System / Power / Calibration / Stop Calibration**.

Possible error messages that can occur during calibration:

Error Message	Solution
Battery is not charging, aborting	Battery temperature may be out of range. Wait until battery temperature settles and try again.
Discharge became invalid, restarting	Calibration will restart itself.
AC power is in an unknown or uncontrolled state; aborting	Plug in unit and restart calibration. Try a different power supply and restart calibration. If it continues to fail, have the unit serviced.

Notification LEDs

At the top of the Nomad are two LEDs that provide status information. The LED states are shown in the following tables.

Right LED	Function
Off	On battery power
Solid yellow	Charging on power supply
Solid green	Fully charged on power supply
Blinking yellow	Battery problem during charging (temperature out of range, defective or missing battery)

Left LED	Function
Off	No notifications & phone off
Blinking yellow	Microsoft notifications
Blinking green – short blink	Phone on - network available
Blinking green – long blink	Phone on - data transfer in progress

NOTE: If the left LED is blinking green, battery power is being consumed due to the cellular modem being turned on, even when the device is suspended.

Speaker and microphone

Your unit comes with an integrated speaker and a microphone. It also has an audio jack that is wired for a headset with a mono speaker and microphone combination. It is not for stereo headsets.

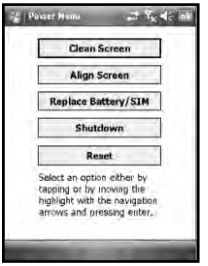
To record, tap **Start / Programs / Notes**. If you do not see the **Recording** toolbar, tap **Menu / View Recording Toolbar**. Tap the round record symbol on the screen. The unit will record until **Stop** is pressed. The recorded file will be saved in the Notes folder.

Power key features

The **Power** key turns the unit on and off and performs a number of additional functions.

Turn backlight on/off: To toggle the backlight on or off, hold down the **Power** key for approximately 1 second. Once toggled off, the backlight will stay off until it is toggled back on. Screen taps and key presses will not cause it to turn on.

Power menu: Hold down the **Power** key for about 3 seconds to display a countdown. Continuing to press the **Power** key will cause a reset when the countdown reaches zero. If you release the **Power** key while the countdown is proceeding, you access the following menu. Tap an option or **OK** to exit.


Power Menu
Clean Screen
Align Screen
Replace Battery/SIM
Shutdown
Reset
Select an option either by tapping or by moving the highlight with the navigation arrows and pressing enter.

Clean Screen: Disables the touchscreen for cleaning. Press the enter key to re-enable the touchscreen.

Align Screen: Repeats the alignment procedure.

Replace Battery/SIM: Ensures that alarms will not wake up the unit while changing the battery or the SIM on WWAN units.

Shutdown: Intended for long term storage to put the unit in its lowest power mode. Running application state, unsaved data, and real-time clock settings will be lost. Internal GPS parameters will be reset to their default settings. To take the unit out of the shutdown mode, press the power key and the unit will boot up. **NOTE**: While in shutdown mode, the battery LED does not work, but if the power supply is plugged in, it will still charge.

Reset: Stops all running programs and restarts the unit. No file system data is lost, only open or unsaved files will be lost. All registry settings, control panel, personal information, GPS settings and databases are preserved.

NOTE: if the countdown or the Power menu does not appear when the power button is held down, continue to hold down the power button for at least 20 seconds to reset it.

Perform a Clean Boot

WARNING: All application software installed by the factory and the customer, plus licenses, settings and user data will be cleared if this function is performed!

Hold down the **Power** key and press the right soft key ⊖ to display a countdown. Continue to hold down **both** keys until it counts down to zero, followed by a brief appearance of the boot screen. Continue to hold both keys down until a screen appears warning that if you continue, this operation will clear the persistent store. Follow the instructions on the screen ONLY if you want to completely clear your unit.

NOTE: ScanAgent, SatViewer and CellStart (found on the documentation CD) and any other applications installed will need to be reinstalled using ActiveSync. Certain configuration parameters of the internal GPS receiver (baud, parity, etc.) will remain unchanged.

Storage memory

Unlike many handhelds which can lose data if they lose power, all your data is always stored in non-volatile persistent storage memory. Losing power will not impact **saved** data or configurations other than the real-time clock. This means that you do not have to use a RAM backup utility to protect your data. However, you can lose data by accidentally deleting or overwriting it. As with any computer system, we recommend that you regularly backup your data to removable media or to a PC.

Accessing storage memory using File Explorer

File Explorer (**Start / Programs / File Explorer**) lets you browse the contents of folders on your unit. To easily delete, rename, or copy an item, touch and hold the item.

NOTE: Unlike PC's, Windows Mobile does not support a Recycle Bin. Once a file is deleted, it cannot be recovered.

Status indicators

Following are some of the status indicators seen on your unit.

Icon	Description	Icon	Description
	Battery power is low		Indicates that one or more networks are present. Tap to access an available network
	Battery power is very low		Wireless LAN connected
	Battery communication error		Active connection, but not currently synchronizing
	Battery charging		Inactive connection to computer or wireless network
	Battery level		Synchronizing
	Battery calibration in progress		Synchronizing error
	Instant messages received		E-mail has been received
	Speaker is on		Pending alarm
	Speaker is off (or in mute position)		Phone is turned on and signal strength
	SIM card missing		Phone is turned off. To turn it on, tap this icon
	Faulty SIM card		No signal
	New voice mail		No service. Phone connection unavailable or network error.
	Tap to view more notifications		Lost signal. The unit is searching for a signal.
	Data call is in progress		EDGE available
	New Instant message received		EDGE connected
	Roaming mode		GPRS available
			GPRS connected

Settings on your Unit

Tap **Start / Settings**. Tap any of the icons on the **Personal**, **System** or **Connections** tabs to customize the unit settings to your own preferences. Tap **OK** to exit the settings. Some of the more useful settings are described below.

Lock (password)

If you want password protection from unauthorized use of your unit, tap **Personal / Lock**. The password must be entered every time you turn the unit on or resume operation.

WARNING: BE CERTAIN TO REMEMBER THE PASSWORD. The only way to recover from a forgotten password is to perform a Clean Boot. However, you will LOSE all application software, licenses, settings and data on your unit. For instructions on how to perform a Clean Boot, see page 17.

Buttons (keys)

Tap **Personal / Buttons**. You can assign your favorite programs to several of the keypad buttons. The list of assignable keys is shown on the left hand side with the program that is assigned by default on the right. To reassign a key, select the key you wish to change in section 1 and choose the desired program or action from the pull-down list in section 2. By default, the key will take you to the Camera application and the Camera Focus. The left soft key is assigned to the Flashlight, if the camera is present and the right soft key is assigned to the laser scanner, if present.

On the numeric data keypads, the yellow function key (sticky FN) accesses the tasks in yellow, including the Navigation arrows. Several settings can be changed under **Keyboard Options**.

Auto release: Press and release the function key to access a yellow task for one use. It then goes back to the keytop tasks.

Manual release: This is the default. Press the function key to toggle it on and off. Yellow tasks remains active until the function key is pressed again.

***Disabled*:** The function key has to be held down while pressing any other key to access the yellow task.

Play Sticky Key Sounds: To disable sticky key sounds, remove the check in the box.

Backlight for display and keypad

Tap **System / Backlight**. Change the settings as follows:

Display backlight: The default is on. Tap **Battery Power**, **External Power** and **Brightness** tabs to change settings.

Keypad backlight: Make changes by tapping the **Keypad Battery**, **Keypad External** or **Keypad Brightness** tabs.

Power

Tap **System / Power** to view the approximate battery power remaining. Tap the **Advanced** tab and choose the settings for automatically turning off the unit when not in use.

Tap **System / Power / Calibration** to see if calibration is recommended. For more information on calibration, refer to page 14.

Memory

Tap **System / Memory** to see how much Storage memory (Flash) and Program memory (RAM) is available. If there are external cards installed, tap **Storage Card** to view the available memory on the card. If there is more than one card installed, tap the dropdown arrow to select the different cards.

Flash Settings

Tap **System / Flash Settings.** The Flashlight turns on automatically. You can change the intensity of the Flashlight and the intensity of the Flash used for the camera. To turn the Flashlight on and off, push the left soft key.

Task Manager

Closing programs still leaves them resident in RAM. Windows Mobile will close background programs to free up RAM if resources are low. To manually close programs, tap **Start / Programs / Task Manager.** Tap on the program and tap **End Task** or tap **Menu** / **End all Tasks**.

System information

Tap **System / System Information**. Firmware version, serial number, processor speed, RAM and Flash size, wireless configurations, battery and card port information can be found here.

Communication

Your unit may offer multiple methods of communication with other devices as described below. Not all the features apply to every unit, as some of the features are offered as options. If the feature described does not apply to your unit, please disregard that section.

Connecting to a PC

Connecting your unit to a PC allows you to copy files, synchronize information, send and receive e-mail and install applications on your unit. Connectivity software is pre-installed on your handheld unit.

Windows XP SP3 or earlier: Microsoft ActiveSync 4.5 or greater is required. (Microsoft Office Outlook 2000 and older is not supported by ActiveSync 4.5.) NOTE: If you have an earlier version of ActiveSync installed on your PC, you need to upgrade to version 4.5 prior to connecting to your unit. Go to www.microsoft.com and search for ActiveSync.

Windows Vista & Windows 7: Microsoft Windows Mobile Device Center may be pre-installed on your PC. If it is not on your PC, go to www.microsoft.com and search for Windows Mobile Device Center to install it. **NOTE**: It does not recognize the serial port. You must connect by either USB or Bluetooth.

IMPORTANT: Do not connect your unit to the USB port on the PC until **after** you install connectivity software to your PC. If you prematurely connect the unit to your PC, your PC USB drivers may get into a confused state and will not connect. If you suspect that something like this has happened, uninstall the connectivity software on your PC, reboot, and reinstall.

After the connectivity software is installed on the PC, connect the unit to the PC:

1. Connect the USB end of the synchronization cable to the PC.
2. Turn on your unit.
3. Connect the mini-USB end of the cable to your unit.

Troubleshooting connection problems

1. Confirm the unit is configured to communicate with the PC. Tap **Start / Programs / ActiveSync / Menu / Connections.**

Confirm the box **Synchronize all PC's using this connection** is checked and **USB** is selected from the dropdown list.

2. Try disabling any personal firewall software running on the PC. TCP/IP ports need to be open.
3. Reset the unit.
4. If you have more than one unit, PC and/or cable, testing different combinations of equipment can help isolate the cause of the problem.
5. If you suspect the unit may have been connected to the PC USB port before the connectivity software was installed, then uninstall, reboot the PC, and reinstall.
6. Confirm the version of connectivity software used on your PC (Microsoft ActiveSync 4.5 or greater for Windows XP or Windows Mobile Device Center for Windows 7 and Vista).
7. Tap **Start / Settings / Connections / USB to PC** and change the check box **Enable advanced network functionality**.

Working with Bluetooth

All units have embedded Bluetooth capability—a short-range wireless communication technology that exchanges information over a distance of up to 30 feet (10 meters), without requiring a physical connection.

Bluetooth settings: tap **Start / Settings / Connections / Bluetooth.**

***Mode*:** To enable Bluetooth, select the check box **Turn on Bluetooth**. If you want other Bluetooth devices to find your unit, also select the check box **Make this device visible to other devices**.

Devices: Tap **Add new device** to search for other Bluetooth devices. For enhanced security, use passcodes.

COM Ports: Available only for Bluetooth-connected devices that support serial (COM) connections.

Power: Maintain Bluetooth connections when device is turned off. When this check box is selected, Bluetooth connections on your unit are not terminated when your unit is turned off (suspended). When the unit is turned back on, the Bluetooth connections are intact, provided the other Bluetooth device is still connected. (The other device may not have this feature and may disconnect.) **NOTE**: Communication cannot occur with other Bluetooth devices while your unit is suspended.

Power: Allow Bluetooth activity to turn the device on. When this check box is selected, another Bluetooth device can send data and your unit will turn on and reply if necessary. **NOTE**: It is recommended that your unit be configured to automatically turn off when not in use. (See the Power section on page 20.) Otherwise, another Bluetooth device could turn on your unit, transfer data and if it does not turn off again, drain the battery.

Creating a Bluetooth Partnership: Bluetooth partnerships are required for connections to some PC's, printers, and headphones. Configuring Bluetooth connections vary depending upon how each Bluetooth device works. Refer to all device documentation.

1. Tap **Start / Settings / Connections / Bluetooth / Mode.** Ensure that both devices have Bluetooth turned on in the Mode area, are visible and within close range.
2. Tap **Devices / Add new device…** Wait a few moments while your unit searches for Bluetooth devices.

3. Tap the name of the other Bluetooth device and tap **Next.** For enhanced security, use passcodes. Enter the same passcode on the other unit.
4. If desired, change the name of the other device and tap **Finish**.

Once a partnership has been created, the devices do not need to be configured as visible any more.

Bluetooth connection with a PC

1. Ensure that your PC has connectivity software installed. See Connecting to a PC on page 21.
2. Set up a partnership between your unit and the PC. Refer to your PC documentation for instructions.
3. After a few moments, select the PC from the Device list.
4. Confirm that ActiveSync service is available and place a check in the check box and tap **Finish**.
5. Tap **Start / Programs / ActiveSync / Menu / Connect via Bluetooth**.

Bluetooth connection with a printer: If the printer is Bluetooth-enabled via Bluetooth serial profile, it is possible to establish a Bluetooth connection.

1. Set up a partnership between your unit and the printer. (If the printer asks to connect to your unit, tap **No**.) Refer to your printer documentation for instructions and to see if a passcode is required.
2. After a few moments, select the printer from the Device list.
3. Confirm that serial port service is available and place a check in the check box and tap **Finish**.

NOTE: Windows Mobile operating system does not support printing without additional third-party software.

Bluetooth-enabled headphone: You can use a Bluetooth stereo A2DP headphone only. Bluetooth handsfree audio devices that are typically used with cell phones are not supported.

Troubleshooting Bluetooth connection problems: If your unit cannot find another Bluetooth device, confirm that the device is within range (less than 30 feet / 10 meters) and no large objects obstruct the path of other Bluetooth-enabled devices. Confirm that the device is turned on and has been configured to be discoverable**.**

Working with Wi-Fi (802.11)

If your unit comes with built-in Wi-Fi (also called Wireless LAN (WLAN) or 802.11) capability, you can wirelessly transmit data to and from your unit by connecting to available access points or hot spots. To find out if you have Wi-Fi installed in your unit, tap **Start / Settings / System / System Information / Wireless**.

The Wi-Fi is off by default; however the on/off state will persist after a reset. To turn the Wi-Fi on or off, tap Wi-Fi from the **Today** screen or tap **Start / Settings / Connections / Wireless Manager** and tap **Wi-Fi**. Turn it off when not in use to save battery power and possibly speed up other processes.

To configure Wi-Fi, tap **Tap here for Wi-Fi configuration** on the Today Screen.

1. Wi-Fi by default is disabled. Tap **Options** / **Enable Wi-Fi**.
2. Tap **Scan for Networks** to see the available networks.
3. Tap the network you want to connect to. The networks with three or four bars provide a better connection. Tap **Next.**
4. Tap **Finish** to begin using an open network. If the network does not require passwords, no changes are required.
5. If the network requires authentication, a Network Authentication dialog will open. For networks that require network keys, enter the network key into the dialog box and tap **Finish** to begin using the network.
6. For advanced networks tap the Authentication and Data Encryption required for this network. Additional keys or certificates may be required.

Status: Shows the details of your current connection.

Tools: Test connectivity by entering in a known good URL and tap **Start Ping.** You can also manage configuration files here.

Advanced: You can set specific Wi-Fi settings required by some networks. Administrators can also set a password to limit access to configuration settings.

To configure many Nomads identically, use the following steps:
Saving the Wi-Fi config file:

1. Configure a Nomad as desired and save the configuration under **Start / Settings / Connections / Wi-Fi Settings / Tools / Store**

Configuration to File. The default save location is My Documents.

2. Create a folder called **TRAUTOWLAN** on an external storage device (SD card, CF card, or USB drive). This folder must be in the root directory of the storage device.
3. Copy the saved configuration file to the TRAUTOWLAN directory.

Loading the saved Wi-Fi config file:

1. First ensure the Wi-Fi Config is closed on the Nomad that you are loading the new config by tapping **Options** / **Close**.
2. Insert the external storage device into the Nomad.
3. Tap **Start / Settings / Connections / Wi-Fi Settings.** A dialog will appear, asking if you would like to apply the config. Tap **Yes**.

NOTE: The admin password must be entered if one is set.

Exchange ActiveSync: Exchange ActiveSync, a component of Exchange Server, facilitates data synchronization between your unit and an Exchange server. This synchronization can occur over a network connection, allowing you to update calendars, contacts, tasks and the Inbox on your unit without directly connecting to a PC. The server must be running Exchange Server 2003 SP2 or later.

To use Exchange ActiveSync, confirm with your system administrator that an Exchange Server is available. The administrator will provide you with a login name, password, server name, and domain name. To configure Exchange ActiveSync on your unit, tap **Start / Programs / ActiveSync / Menu / Add Server Source.** Enter the server address and confirm with your administrator whether the Exchange server requires an encrypted (SSL) connection. Tap **Next**. Enter the user name, password and domain and tap **Next.** Choose the data types you want to synchronize and tap **Finish**.

Troubleshooting Wi-Fi connection problems: If the unit seems to be connected to the network, but you are having difficulty using the network connection, tap **Start / Settings / Connections / Wi-Fi Settings / Networks,** highlight the connection being used and tap **Options / Edit** and confirm that the connection is appropriately configured as either a **Work** or **Internet** connection.

Additional connectivity

Your unit supports several additional kinds of connections. If you do not have embedded Wi-Fi or GPS, you can purchase CF or SDIO cards to add the functionality.

Installing additional software on your unit

Third-party software designed for Windows Mobile is installed by running a setup program on the PC while the unit is connected over ActiveSync or Windows Mobile Device Center. Follow the setup instructions that came with your software. If prompted, perform a reset to complete the installation.

Working with the Camera

Depending upon the configuration of your unit, it may have an integrated digital camera. If so, the protective cap on the top of the unit will have a clear window.

Using the Camera:

1. Press the key to launch the Pictures & Videos application.
2. Tap on **Camera**.
3. Press the key to focus the image.
4. Press the **Enter** key to take a picture.
5. Press the **Enter** key to close the picture preview.
   (Files are saved in **File Explorer** (under **My Device**) **/ My Documents / My Pictures**.)

NOTE: The camera preserves battery power by going into standby mode after 30 seconds of no camera usage. Tap the screen or press a button to resume. The GPS will continue tracking satellites if GeoTagging is turned on. Either "Acquiring Satellites" or "GPS Ready" will be shown above the preview image when the viewfinder is not in standby.

Managing Pictures:

Tap the desired picture to make it full screen. Tap **Menu** to see the following features:

Zoom: A zoom window shows up in the lower right hand corner of the display. You can zoom in, zoom out or return to normal view (only on higher resolution pictures).

Play Slide Show: Tap the display to see the icons to pause, advance, return to the last slide, or stop the slide show.

Set as Today Background: Tap to place the selected picture as the background of the Today screen.

Beam Picture: For use to beam to another Bluetooth device.

Save: Saves the selected picture to a contact or a jpg.

Edit: Puts a selected picture into an editable mode. To rotate the picture 90 degrees, tap the left application key **Rotate**.
Tap the right application key **Menu** to select the following:
- ***Crop:*** Tap **Crop** and then drag the stylus on the screen to select the area to be cropped.
- ***Auto Correct:*** Automatically corrects the color in images.

- ***Undo:*** Takes the picture back a step.
- ***Revert to Saved:*** Eliminates all edits to the picture.
- ***Save As:*** Saves the edited file under a new file name. If you want it saved under the previous name, tap **OK**.

Properties: Tap to see the selected picture's properties.

Send to your space: If you are connected to the internet, tap the left application key **Send** to e-mail the selected picture.

NOTE: To create folders to manage your pictures, tap **Menu / Edit / New Folder w**hile in the thumbnail view. Tap **Menu / Edit / Cut** and then **Paste** to move the files to the new folder. (You can rename the folder using File Explorer.)

Camera settings:

Tap **Start / Programs / Pictures & Videos / Camera**. While in the Camera mode, tap **Menu**.

Video: To put the camera into video mode, tap **Menu / Video**. To switch out of video mode, tap **Menu / Still**.

Mode: Tap **Normal**, **Timer** (for a 5 second delay), or **Burst** (takes 5 photos ~3 seconds apart; the preview window stays the same).

Brightness: Tap plus numbers to lighten; minus numbers to darken.

Resolution: The larger the resolution, the larger the file size.

Zoom: Tap the larger number to zoom in and the smaller number to zoom out.

White Balance: Instead of using the automatic mode, you can correct colors needed (incandescent, sunny or fluorescent).

Flash: Tap **On** when a flash is needed for taking the picture.

Full Screen: Tap to make the picture full screen. Tap the screen to return the menus. Tap **Full Screen** again to stop this function.

Options: Tap to make changes.

- ***General:*** The picture can be resized for e-mailing and the settings can be changed to rotate pictures to the right or left.
- ***Slide Show:*** Change settings to optimize for viewing.
- ***Camera:*** Change settings for saving files.
- ***Video:*** Change settings for audio capture and time limits.

Geo Tagging: Settings that can be changed while using the GPS with the camera.

- ***GeoTagging:*** Choose where the tagging is done: Embed shows the location stamp on the image, Exif is stored in the image data only.

- ***Font:*** Set the size, font, color, location and format of the image embedded location stamp.
- ***GPS Power:*** Determines when the GPS is turned on. If **Always on** is selected, the GPS will be on whenever the camera application is on. The recommendation is to set **Auto Power off** to conserve battery power.

Effects: Flip/Rotate changes the direction the picture is taken and Sound settings can be muted for shutter sound and auto-focus.

Auto Focus: Choose the **Macro** setting to take close shots; choose the **Infinite** setting to take long distance shots.

NOTE: **Focus** is assigned to the key and when pressed it will focus the camera before taking a picture. **Flashlight** is assigned to the left soft key and will toggle the flash on and off to use as a flashlight. To change the intensity of the Flash or Flashlight, tap **Start** / **Settings** / **System** / **Flash Settings**.

Working with the Scanner

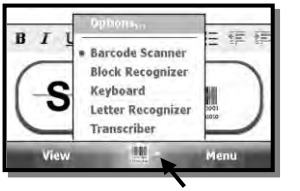
Depending upon the configuration of your unit, it may have an integrated laser 1D barcode scanner. Tap **Start / Settings / System / System Information / CardPort** to see if Barcode Scanner is listed under the Cardport Devices. Also, the cap will have a clear window with a laser warning label. If you do not have your own barcode scanner software to install, there is a basic application called ScanAgent included in the unit. If not on your unit, it may be downloaded from our web site or the documentation CD.

NOTE: Avoid direct viewing of the laser beam. Do not stare into the beam or point directly at eyes.

Using ScanAgent

There are two options for scanning into applications that use text input, such as Excel or Word:

- Press the right soft key.
- Use the Scanner SIP (Soft Input Panel): Tap the arrow next to the SIP. Select **Barcode Scanner**. Tap the scan SIP on the screen to activate the scanner.



ScanAgent setup

To set up ScanAgent and test scanning, tap **Start / Settings / System / Scanner Setup**. Tap **Scan Now** to activate the laser and start scanning immediately. If the scan fails to decode, try moving closer or farther away from the barcode you are trying to scan. To change settings, tap **Edit Config**.

Scan Codes: Check the barcode symbologies you want to scan. Parameters can be changed for each symbology by tapping on **Code Parameters** or **UPC EAN Parameters**. Tap **Restore Defaults,** if desired. Choosing fewer barcode symbologies results in faster scan times.

Scan Parameters: Changes can be made to the scan duration, the barcode symbology, or sounds to play when a scan starts or ends. You can also select different .WAV files for sounds.

Prefix/Suffix: You can add a prefix before the barcode or suffix after. The suffix can also be changed to send TAB or nothing instead of RETURN after the suffix.

For detailed information on these and other settings, please refer to the Software Development Kit provided on our web site.

Working with the GPS

Tap **Start / Settings / System / System Information / Wireless** to see if your unit has built-in GPS. COM2 is the dedicated hardware port for the built-in GPS (COM1 is dedicated to the external 9-pin). The GPS is compatible with applications that accept the NMEA position information using a default setting of 9600 bps.

NOTE: The best GPS performance is obtained when the unit is in the vertical position

Using A-GPS

If the GPS has been used in the prior 72 hours, Assisted GPS (A-GPS) will retain a memory of the satellite paths. The A-GPS satellite data is stored in memory for the satellites visible in your current position. Therefore the Nomad can lock on the satellites quickly, in less than 20 seconds in an open sky.

GPS settings:

If you are using only one GPS-aware application, these settings do not need to be changed. However, to use multiple GPS-aware applications, tap **Start / Settings / System / GPS** and select the following tabs:

Access: The GPS Intermediate Driver allows multiple applications to access the GPS receiver (disabled by default). To enable the GPS Intermediate Driver, select the check box.

Hardware: COM2 is the hardware port dedicated for the built-in GPS. Verify that COM2 is selected. The internal GPS communicates at 9600 baud by default. If it has been modified by a third party program, adjust to match the receiver baud rate.

Programs: Programs that use GPS need to know which port to use to access GPS data. Ensure that the COM port on the GPS-aware application is set to the same port as shown in the Programs tab of the GPS applet. The programs port must be a different port than the hardware port. **NOTE**: Some GPS-aware applications may not communicate over GPD ports.

A-GPS: While Assisted GPS can improve time-to-first-fix, it may reduce accuracy in some situations. Uncheck the box next to **Enable Assisted GPS** and reboot your unit if you wish to disable it.

If you are unable to connect to the GPS using the default GPS settings, you can restore it to factory default settings by performing

a shutdown, and leaving it shut down for approximately 5 minutes. See Power key features on page 16.

Using SatViewer

Your Nomad may have SatViewer™ installed that is ONLY for use with units with built-in GPS. External GPS receivers, Bluetooth GPS receivers, GPS CF cards or other external GPS devices (including other SiRF II or SiRF III GPS receivers) are not supported and may not work correctly with SatViewer.

On your Nomad, tap **Start / Settings / System / System Information / Wireless** to see if it has built-in GPS. If it does, COM2 is the dedicated hardware port for the built-in GPS (COM1 is dedicated to the external 9-pin). Your Nomad GPS receiver is compatible with applications that accept the NMEA position information using a default setting of 9600 bps.

Quick Start: The following steps will allow you to quickly connect to the GPS with default settings:

1. Start SatViewer by tapping **Start / Programs / SatViewer**.
2. Tap on the **GPS** tab.
3. Make sure the COM setting is set to **COM2**.
4. Tap **Connect to GPS**. The fields Lat, Lon, Spd, Az and Ht will all read **?** until SatViewer connects to the GPS and obtains a satellite fix. If you are attempting to get a satellite fix for the first time, it may take several minutes and it is recommended to position your Nomad unit outside with no overhead obstructions.
5. Tap **Sky**. Lat and Lon will change to current latitude and longitude when a satellite fix has been completed.

Welcome to SatViewer. Your on-board GPS receiver features a 20-channel SiRF III GPS receiver. The typical expected accuracy for this GPS receiver is about five to fifteen meters. It has the capability of receiving correction signals (Satellite-Based Augmentation System, SBAS) which may improve the accuracy of the GPS. However, these correction signals are not consistently available in all locations. The typical expected accuracy of the GPS receiver with the correction signals is about three to five meters in an open sky.

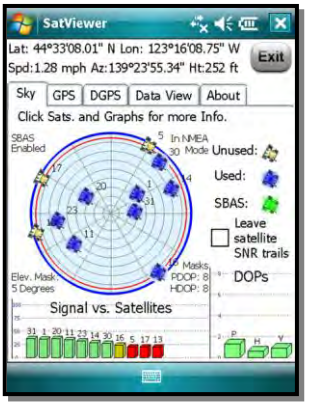
Your Nomad GPS receiver updates its position once every second. It may take several minutes to start tracking the first time you try to use it because it needs time to update its position and download current satellite information from the GPS satellites. This process will occur faster in a location with open sky.

After your Nomad has downloaded the current satellite information, Assisted GPS (A-GPS) will retain a memory of the satellite paths up to 72 hours. Therefore the Nomad can lock on the satellites quickly, in less than 20 seconds in an open sky.

SatViewer provides a way to quickly start using the GPS functionality of the Nomad, but it is not a stand-alone mapping, GIS or navigation program by itself. SatViewer is useful for checking the GPS configuration and enabling advanced features of your Nomad GPS receiver when these settings are not made available in other applications. When changing any GPS settings or other settings, it is important to wait a few moments after tapping on the desired option to allow time for your Nomad GPS receiver to implement the requested change. SatViewer communicates with your Nomad GPS receiver to compute your current position, speed, direction (azimuth) and height. This information is displayed at the top of the screen along with other information about the satellite signals. Speed and direction measurements are only useful when your Nomad GPS receiver is in motion. Standing in one position with your Nomad GPS receiver may result in inaccurate readings in direction and speed. If you are not moving, direction is reported as ? and speed is reported as ~~–0~~". Height calculations from a GPS receiver are typically not very accurate. Vertical accuracy is about two to three times worse than the horizontal accuracy). Units of measurement are only displayed in U.S. feet and heights are only displayed in height above mean sea level (MSL).

The pages of the application are accessed by tapping the various tabs, which are laid out in index card format. The information in each tab is described on the following pages.

Sky Tab



Sky Plot Graphic: The Sky Plot is a graphical representation of where the satellites are positioned in the sky. The top of the circle represents north, the center is straight up, and the farthest right point is east. The outer blue circle represents the horizon and the red circle represents the elevation mask. The light gray circles radiating out from the center are the zenith angles in ten degree increments. The lines bisecting the light gray circles divide the circle into thirty degree azimuths.

The satellite icons are color coded to indicate if they are used, unused, or SBAS satellites. Each icon is labeled with the corresponding satellite's ID number (PRN). If **Leave satellite SNR trails** is checked, the path of the satellites are also marked by a dotted line as each satellite moves across the sky.

Status Indicators: The following four messages are displayed around the sky plot to indicate the current settings configured on other pages:

- **Corrections Disabled / SBAS Enabled**: displays if Satellite Based Augmentation System (SBAS) is enabled or disabled. When SBAS is enabled, your Nomad GPS receiver will attempt to locate, track and use correctional data supplied from an SBAS satellite in order to improve accuracy. There are a limited number of SBAS satellites available, so they may not be readily accessible in your area. This setting is configured in the **Type** field on the **DGPS** page.

- **In SiRF Bin. Mode / In NMEA Mode**: indicates which mode you are running in. Some applications may require GPS data to be sent to the application in the form of a NMEA message, where other applications require the GPS data be sent as a SiRF Binary message. Most mapping and navigation applications can use the NMEA message. This setting is configured with the **NMEA/SiRF Binary** radio buttons on the **GPS** page.

- **Elev. Mask**: displays the current elevation mask. This is the minimum angle above the horizon that a satellite must be located before it is used and is represented on the sky plot by a red circle. This setting is useful when using the GPS in areas where there might be obstructions to the view of low flying satellites (e.g. around buildings or trees). A typical elevation mask setting is between 5 and 15 degrees to eliminate those satellites from being used to calculate a position. The purpose for this setting is to increase the accuracy of the GPS. However, by using this setting, you are reducing the total number of satellites that can be tracked and used by your Nomad GPS receiver. The idea is to eliminate those satellites that may degrade the accuracy of your Nomad GPS receiver. This is configured in the **Masks** section of the **GPS** page.

- **Masks**: Displays the current PDOP and HDOP mask values as configured in the **Masks** section of the **GPS** page. If the measured Dilution of Precision (DOP) value exceeds the value set for the corresponding mask, the resulting calculated position will be ignored. In general, as the value of the DOP decreases, the accuracy of the GPS position increases. DOP values greater than six usually indicate the GPS position data is of poor quality (due to poor satellite geometry) and the resulting positions are less accurate. ***NOTE***: DOPs can not be displayed in Binary Mode, however, the DOP masks are still in effect.

Satellite Icons

- **Unused**: A GPS satellite whose signal is being received, but not being used for position calculations.
- **Used**: A GPS satellite that is being used to calculate your current position.
- **SBAS**: A Satellite Based Augmentation System (SBAS) satellite, which can be used for error corrections. (See the **DGPS** page for more information.)

Leave SNR trails: Creates a dot on the screen for all previous satellite positions that form a trail on the sky plot over time as the satellite moves across the sky.

DOPs Bar Graph: displays the various Dilution of Precision (DOP) values as explained below. DOPs are not displayed when **SiRF Binary** is selected on the **GPS** page.

- **PDOP**: displays the Position Dilution of Precision, which is a combination of HDOP, VDOP and Time Dilution of Precision. It will always be larger than HDOP and VDOP.
- **HDOP**: displays the Horizontal Dilution of Precision, which is a measure of the calculated accuracy of the solution. DOP has no units and lower numbers indicate better solution geometry. In general, the lower the DOP value, the better confidence you have in the position reading from your Nomad GPS receiver.
- **VDOP**: displays the Vertical Dilution of Precision, which is a measure of the calculated elevation.

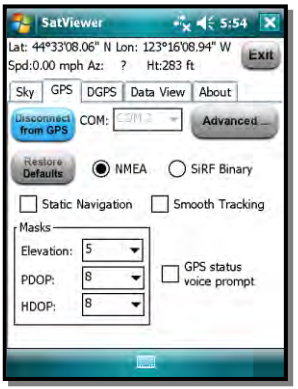
  Each DOP bar is color coded to indicate the DOP quality as follows:

  Green: The DOP is less than three (best).
  Yellow: The DOP is greater than three, but less than six.
  Orange: The DOP is greater than or equal to six, but less than twenty.
  Red: The DOP is greater than or equal to twenty (worst).

Signal vs. Satellite Bar Graph: shows all the visible satellites and their corresponding ID numbers (PRN) ranging from 1 to 32. Also, the PRN for any currently tracked SBAS satellite (ranging from 122 to 138) is displayed in this graph. Tapping any bar will also display the signal to noise ratio (SNR) value for that satellite. The color of each bar indicates the following:

Green: Good satellite signal strength. Satellite is used with an SNR greater than or equal to thirty dB.
Yellow: Fair satellite signal strength. Satellite is used with an SNR less than thirty dB.
Red: No signal or the signal strength is below the minimum allowable threshold. Satellite is not used.

GPS Tab



Connect to GPS / Disconnect from GPS: This button either tries to establish a connection with the GPS receiver chip or disconnects the connection.

COM: used to select the COM port for communication between SatViewer and your Nomad GPS receiver. Your Nomad GPS receiver port is set to COM2 and a baud rate of 9600. The default SatViewer settings shouldn't need to be changed to connect.

NOTE: Before changing COM port or baud rate settings, you must first disconnect from your Nomad GPS receiver before making the changes. After you have changed the COM settings, then you can re-attempt to connect to your Nomad GPS receiver, using the **Connect to GPS** button.

Enabling the Microsoft GPS driver

If you would like to connect two or more programs to your Nomad GPS receiver at the same time (such as SatViewer and a navigation program) you will have to turn the Microsoft GPS driver on by performing the following steps:

1. Tap **Settings / System / GPS.**
2. Tap the **Access** tab.
3. Tap **Manage GPS automatically**. This will turn on the Microsoft GPS driver. Ensure that the GPS program port is COM3 (or any other port available in the Microsoft GPS driver screen) and the GPS hardware port is COM2 with baud rate of 9600.
4. The Microsoft GPS driver will now allow multiple applications to connect to your Nomad GPS receiver at the same time. This can be helpful so that your Nomad GPS receiver can be controlled with SatViewer while other applications are also using your Nomad GPS receiver.
5. In SatViewer and any other program using your Nomad GPS receiver, change the COM port to COM3 (or the COM port specified in Step 3 above). Both applications will connect to your Nomad GPS receiver through the Microsoft GPS driver.

Restore Defaults:

When connected to your Nomad GPS receiver: Tapping the **Restore Defaults** tab will result in the following settings being changed:

- GPS receiver output will be set to NMEA mode
- Static Navigation will be turned OFF
- Smooth Tracking will be turned OFF
- Elevation mask is set to five
- PDOP mask is set to eight
- HDOP mask is set to eight
- GPS status voice prompt is turned OFF
- NMEA message settings under the Advanced page are changed as follows:
    - GGA – 1 sec
    - GSA – 1 sec
    - GLL – off
    - VTG – off
    - GSV – 1 sec
    - RMC – off
- DGPS settings under the DGPS tab are set back to their defaults of Usage: Auto, Type: SBAS ON and SBAS Sat. PRN: Auto
- No change to any COM settings

Each of the above settings (except for the GPS status voice prompt) are sent and applied to your Nomad GPS receiver.

When disconnected from your Nomad GPS receiver: Tapping the **Restore Defaults** tab will result in the following settings:

- GPS receiver output will be set to NMEA mode
- Static Navigation will be turned OFF
- Smooth Tracking will be turned OFF
- Elevation mask is set to five
- PDOP mask is set to eight
- HDOP mask is set to eight
- GPS status voice prompt is turned OFF
- NMEA message settings under the Advanced page are changed as follows:
    - GGA – 1 sec

- GSA – 1 sec
- GLL – off
- VTG – off
- GSV – 1 sec
- RMC – off

NMEA message settings (set to default or otherwise) will be sent to your Nomad GPS receiver and applied the next time you connect to your Nomad GPS receiver (with output set to NMEA).

- DGPS settings under the DGPS tab are set back to their defaults of Usage: Auto, Type: SBAS ON and SBAS Sat. PRN: Auto

Since you are **not connected** to your Nomad GPS receiver, none of the above changes are actually applied to your Nomad GPS receiver. To apply these settings, you will need to first connect to your Nomad GPS receiver and then tap on the **Restore Defaults** button.

- If the Microsoft GPS driver is not used, the COM port gets set to COM2.
- If the Microsoft GPS driver is used, the COM port gets changed to its assigned program port.
- Baud rate is set to 9600
- Data bits are set to 8
- Flow is set to None
- Parity is set to None
- Stop bit is set to 1

To completely restore your Nomad GPS receiver back to the factory settings, perform a system shut down on your Nomad for a minimum of five minutes before turning the unit back on and attempting to reconnect with your Nomad GPS receiver in SatViewer. In order to perform a system shut down, press down and hold the Power button for a few seconds and then release. A Power Menu is displayed with different options. Tap on the Shutdown button to put your Nomad into a system shutdown. This procedure is beneficial when you are unable to connect your Nomad GPS receiver to SatViewer due to a change in the

communications settings caused by another software application. In most cases, the factory reset procedure only needs to be used when another application has changed the settings of the Nomad GPS receiver and you would like to set them back to their original configuration.

NMEA / SiRF Binary: is where you choose to set your Nomad GPS receiver to NMEA mode or SiRF Binary mode. When in SiRF Binary mode, DOP values are not available in the Sky page. The mode you select here will also determine the format for the information that can be viewed from the **Data View** page. Most GPS applications require that your Nomad GPS receiver be set to output NMEA messages. There are some specialized GPS applications which require the SiRF Binary output mode. Please consult the documentation of your GPS application to see which output format you should use and then choose that option via this setting.

Static Navigation: This feature keeps your Nomad GPS receiver from showing the normal erratic positions when standing still. When checked, small changes in your position are interpreted as GPS error and your computed position will remain unchanged. For applications where you will be mapping or navigating at walking speed or slower, it is recommended to disable this feature, so even small changes in position will be shown.

Smooth Tracking: This feature smoothes the track generated by your Nomad GPS receiver. When checked, movement is smoothed mathematically to reduce the seemingly jagged movement resulting from GPS error. For unfiltered, raw GPS readings, you should leave this box unchecked. However, if you want to see a smoother overall position (e.g. while navigating), then turn this feature on via the checkbox.

NOTE: Both the **Static Navigation** and **Smooth Tracking** features modify your true GPS positions mathematically so these features should not be used when you need the most accurate GPS positions available.

Masks: These define limits that determine when a satellite will be used or not used.

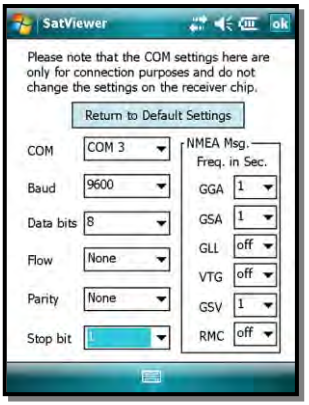
- **Elevation**: This is the minimum angle above the horizon that a satellite must be located before it is used. A value of zero would essentially turn off the elevation mask. A value of ninety would mask all satellites. A typical elevation mask setting is between five and fifteen degrees to block tracking of those satellites potentially affected by multipath error due to obstructions (e.g. buildings or trees). Multipath error is error to the GPS position from the satellite signal bouncing off of objects before reaching the GPS receiver.
- **PDOP**: This is the maximum allowable Position Dilution of Precision (PDOP), which is a combination of HDOP, VDOP and Time Dilution of Precision. While exceeded, the GPS data will not be used for position calculations. This setting is advantageous when quality and reliability of your position are of concern. Typically, PDOP values of six or greater are considered "suspect" and therefore resulting positions are less reliable.
- **HDOP**: This is the maximum allowable Horizontal Dilution of Precision (PDOP), which is a measure of the geometrical quality of the solution. While exceeded, the GPS data will not be used for position calculations.

NOTE: DOPs can not be displayed in Binary Mode, however, the DOP masks are still in effect.

GPS status voice prompt: When checked, changes in GPS quality will result in an audible message indicating the change.

Advanced: When tapped, opens the **Advanced GPS** screen described on the following page.

Advanced GPS Page



Return to Default Settings:

When connected to your Nomad GPS receiver: Tapping the **Return to Default Settings button**, the following settings are changed and applied to your Nomad GPS receiver:

- Resets NMEA strings to defaults of:
  - GGA – 1 sec
  - GSA – 1 sec
  - GLL – off
  - VTG – off
  - GSV – 1 sec
  - RMC – off

NOTE: The COM settings are grayed out and cannot be changed until you disconnect from your Nomad GPS receiver.

When disconnected from your Nomad GPS receiver: Tapping the **Return to Default Settings button**, the following settings are changed:

- Resets NMEA strings to defaults of:
  - GGA – 1 sec
  - GSA – 1 sec
  - GLL – off
  - VTG – off
  - GSV – 1 sec
  - RMC – off

NMEA message settings (set to default or otherwise) will be sent to your Nomad GPS receiver and applied the next time you connect to your Nomad GPS receiver (with output set to NMEA).

- If the Microsoft GPS driver is not used, the COM port gets set to COM2.
- If the Microsoft GPS driver is used, the COM port gets changed to its assigned program port.
- Sets baud rate to 9600
- Data bits are set to 8
- Flow is set to None
- Parity is set to None
- Stop bit is set to 1

Since you are **not connected** to your Nomad GPS receiver, none of the changes are actually applied to your Nomad GPS receiver.

COM: used to select the COM port for communication between SatViewer and your Nomad GPS receiver. This field is also available on the **GPS** page for convenience and changing it in one location will automatically change it in the other location.

Baud: sets the speed for communications between your Nomad GPS receiver and SatViewer. The baud rate of your Nomad GPS receiver is 9600 by default. Please note, if you have used another application to change the baud rate of your Nomad GPS receiver to 4800, it will take longer for your Nomad GPS receiver to respond to changes made within SatViewer. During this period, you may see menu items grayed out while SatViewer is sending the new settings to your Nomad GPS receiver.

Data Bits: should match the data bit rate set in the device you are communicating with.

Flow: should match the flow control set in the device you are communicating with.

Parity: should match the parity set in the device you are communicating with.

Stop bit: should match the stop bit set in the device you are communicating with.

NMEA Msg: This section allows you to control which NMEA messages are output by your Nomad GPS receiver and the rate at which they are output. The GGA NMEA message is automatically enabled by default and cannot be disabled. You may change the frequency of output for the GGA NMEA message, but you may not disable it. Other NMEA messages listed may be disabled as well as changing the frequency of output. The ability to change the frequency of output and to disable certain messages is useful when communicating at a very low baud rate to prioritize which NMEA messages are sent. Each field allows you to select a value from one to five (measured in seconds), or to select **OFF**. For example, selecting three instructs the receiver to output the corresponding NMEA message once every three seconds. Selecting **OFF** instructs the receiver to never output the corresponding message. This setting is only applicable when you need to specify your Nomad GPS receiver to send out very specific NMEA messages at specific times for your GPS application. Most users will not need to change this as the default NMEA settings will work for most GPS applications trying to display common GPS information (e.g. position, velocity, direction).

DGPS Tab

Differential GPS (DGPS) positioning involves subtracting a combination of ranges measured to various satellites from two or more receivers measuring the same satellites simultaneously. When the signals are subtracted, the major error sources cancel each other out.

The GPS receiver used with SatViewer can provide DGPS through the Satellite Based Augmentation System (SBAS), which uses multiple ground stations and then broadcasts corrections to the end users via SBAS satellites.

Usage: configures the DGPS requirements as follows:

- **Auto**: will use DGPS when available, but continue to provide autonomous (uncorrected) positions when DGPS is not available.
- **DGPS Required**: will only provide positions when DGPS is available. Autonomous positions will not be available. When DGPS data is available, it can be applied to your GPS position to increase the accuracy of your position reading.
- **Ignored**: will not provide DGPS positions even when available.

NOTE: Due to the limited number and availability of SBAS satellites in the sky, DGPS coverage from SBAS satellites may not always be available. Therefore, it is recommended that you use the **Auto** setting where the GPS will use and apply DGPS data when available, but will continue providing positions even when DGPS is not available.

Type: allows you to select SBAS ON or SBAS OFF. (Currently SBAS is the only DGPS service available, but other DGPS systems may be available in the future.)

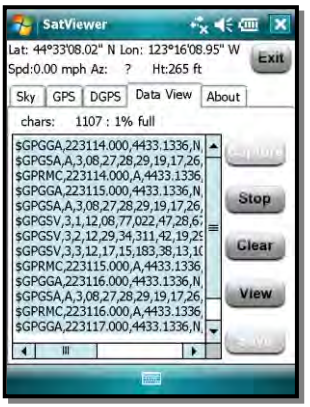
SBAS Sat. PRN: configures which SBAS satellite to use. Selecting **Auto** instructs the GPS receiver to automatically make the selection.

Return to Default Settings: **If connected to your Nomad GPS receiver**, the following settings are changed and applied to your Nomad GPS receiver:

- Restores DGPS settings back to default state:
  - Usage: Auto
  - Type: SBAS ON
  - SBAS Sat PRN: Auto

If disconnected from your Nomad GPS receiver this button has no effect on DGPS settings.

Data View Tab



The **Data View** page allows you to capture and view the GPS data being sent to SatViewer by your Nomad GPS receiver over the COM port. There are two formats for data that can be viewed from this screen depending on if you are running in NMEA or SiRF Binary mode, as configured in the **GPS** page. This feature is useful if you have a need to view or store the raw GPS messages as they come out from your Nomad GPS receiver in a textual format. This feature is for advanced GPS users who need the ability to store the raw GPS information as ASCII text in one large LOG file. This feature is intended to collect up to several minutes of data. It is not intended for extended data collection sessions.

When in NMEA mode, the data displayed is simply the raw NMEA codes being sent over the COM port, which are displayed in their original ASCII format.

When in SiRF Binary mode, the data being sent over the COM port is in binary format and therefore must be converted to ASCII text before it can be displayed in a useable format. This involves converting each binary message to hexadecimal text and adding a text tag to each message that explains what type of message it is.

Chars: Lists the number of characters captured to the buffer. The maximum amount of characters that can be stored to the buffer is approximately 64,000 characters. A –% full" indicator for the used buffer is provided for your convenience.
Capture: Begins capturing the data passing over the COM port and storing it to a buffer.
Stop: Stops capturing data and outputs the contents of the buffer to the screen.
Clear: Clears the buffer and any data listed on the screen.
View: Outputs the contents of the buffer to the screen while capturing data.
Save: Opens a new screen where the contents of the **Data View** screen can be saved to a file.

Working with the Wireless WAN

Depending upon the configuration of your unit, it may have the additional wireless wide area network (WWAN) feature. After purchasing a data connection plan from your local GSM cellular provider, you can communicate from field to office, send e-mail messages and send text messages.

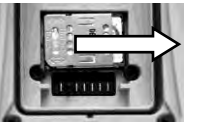
NOTE: When browsing the internet using the cellular connection, you must turn off the Wi-Fi (802.11) or the Nomad will default to the Wi-Fi to browse.

CAUTION:

- DO NOT use your Nomad while driving a moving vehicle.
- DO NOT remove the WWAN antenna unless directed by support personnel.
- When you are on a plane, in a medical facility or at a gas station where wireless communication devices are not allowed, go to **Wireless Manager** to TURN OFF all wireless communications. Simply turning the **Power** key off does not turn off these communications.

Installing (or changing) the SIM card

1. Hold down the **Power** key for about 3 seconds and release to display the power menu. Tap **Replace Battery/SIM** to ensure the alarms will not wake up the Nomad.
2. Remove the hand strap.
3. Use a small #1 Philips head screwdriver or the screwdriver on the end of your stylus to loosen the 4 screws in the battery door.
4. Remove the battery from the unit.
5. Slide the silver SIM carriage to the unlocked position (to the right).
6. Gently open the hinged SIM carriage door, and place the SIM card (purchased from your cellular service provider) into the slot. The golden contacts should be facing down. Also ensure that the notched corner aligns with the angled corner on the SIM carriage.



7. Close the SIM carriage and then slide it to the locked position (to the left).
8. Place the battery into the unit.

9. Place the battery door over the battery, with the flat side of the battery door at the top of the unit. Use the screwdriver end of the stylus or screwdriver to gently tighten the four screws.
10. Replace the hand strap.

Setting up the cellular data connection

1. Tap **Start / Programs / CellStart**. Under **Available Data Settings**, tap the **[+]** by your country to expand carriers.
2. Tap the **[+]** by the carrier you have signed up with and select **Typical** and tap **Add Settings**.
3. Ensure the phone is turned on and test the settings by opening Internet Explorer and browsing to a web page.
4. Try other settings before calling the carrier technical support.

NOTE: If you use multiple configuration settings, you can select the primary by tapping the setting and tapping **Default**.

Removing cellular data settings

1. Tap **Start / Programs / CellStart**.
2. Tap **Refresh** to see the current list of configurations.
3. Select the configured data setting you wish to remove.
4. Tap **Remove** and **OK**.

NOTE: After removing a default configuration, the top setting will become the new default.

To access the detailed settings for each configuration, tap **Menu** / **Open Connections Applet** for the **Connections Settings**.

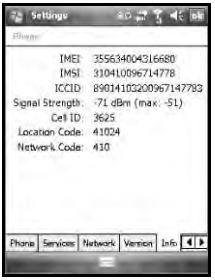
Customizing your phone

Tap **Start / Settings / Phone**.

Phone Number: The ring for text messaging notifications can be changed. **Tap Start / Settings / Sounds & Notifications / Notifications** and select **Messaging: New text message**. Choose the sound you want.

PIN Number: a PIN can be set to block unauthorized access to your data connection.

NOTE: This device is data-only and dialing controls are not available. Under **Services**, voice calls to the Nomad can be forwarded to another phone.



IMEI: Unique number that identifies the phone module that is embedded in the Nomad.

IMSI and ICCID: Unique numbers embedded on the SIM card.

NOTE: If you purchase a SIM card separately, the phone service provider may want your Nomad IMEI number. It is located on this screen, as well as in the battery compartment.

NOTE: Under Band settings, leave settings set to **Auto Band Select** unless there is a good reason to make these adjustments manually.

Starting a cellular data connection

Tap **Wireless Manager** on the Today screen to turn on the phone. It will automatically establish a cellular connection when needed.

If you want to start the connection manually, tap **Start / Settings / Connections** / **Connections**. Tap **Manage existing connections**. Tap and hold on the newly created connection name and tap **Connect**.

NOTE: EDGE is a faster form of GPRS. E or G will automatically appear in the notification bar and will depend on the network capabilities in that area. Some service providers may only provide GPRS.

Using the WWAN features

NOTE: The Wireless WAN features of this Nomad are used only for data communication and do NOT have voice capability or the ability to send MMS messages (Multimedia Messaging Service). Voicemails left on this number can be retrieved only by using another phone, depending upon the plan you purchased from your service provider. It is recommended to request the data-only plan from your service provider and have a —voice restriction" placed on your line.

Use the **Wireless Manager** to turn on the phone and wait at least 30 seconds before using the phone. The Nomad may say the phone is on, but it needs to register with your service provider before it works properly. To save battery power, turn off the phone feature when not in use.

Browsing the Internet

Tap **Start / Internet Explorer**, and enter the address of one of your favorite web sites.

Internet Sharing

The Internet service from your Nomad can be shared with a computer. Tap **Start / Programs / Internet Sharing.** You can connect either through USB or Bluetooth.

SMS messages

You can send a SMS (short message service) in exactly the same way as a normal mobile telephone. Each SMS text message can contain a maximum of 160 characters or less, depending on your service provider.

Sending and receiving e-mail

E-mail setup: Tap **Start / Messaging / Setup E-mail.** Follow instructions to set up the e-mail service. You can synchronize with a POP Mail server, or with a Microsoft Exchange server.

Sending and receiving messages: Tap **Start / Messaging** and select an e-mail account. Tap **New** to compose a message and tap **Send.** Input the contact information. Depending on your account settings, your unit will check for new e-mail periodically. You can force a download of new messages, by tapping **Menu** / **Send/Receive**.

Troubleshooting

What do I do to keep my battery from failing during a job? Consider carrying a fully charged spare battery in the field. The unit is designed so that battery replacement can be easily done.

How do I delete files? Open File Explorer and browse to the file to be deleted. Touch and hold on the file and tap **Delete** from the menu that appears. Unlike PC's, Windows Mobile does not support a Recycle Bin. Once you delete a file, it cannot be recovered.

How can I see file extensions or file attributes? Windows Mobile File Explorer does not support viewing file extensions like Windows Explorer on a PC. You can connect the unit to your PC and browse from the PC to view file extensions. (Refer to Connecting to a PC on page 21 for details.) Third-party file management programs are available for Windows Mobile devices that may support a Recycle Bin, viewing file extensions and more.

How can I tell how much memory is available? Tap **Start** / **Settings** / **System** / **Memory** to view available free storage and program memory. Tap Storage Card to view available memory on memory cards that may be installed. If there is more than one card installed, tap the dropdown arrow to select the different cards.

How can I make the display more viewable? Tap **Start** / **Settings** / **System** / **Backlight** / **Brightness** to adjust the display brightness; however, this will reduce battery life. You can also change the background theme found under **Start** / **Settings** / **Personal** / **Today**. Confirm that you have only one screen protector in place.

Can I use my SDIO device with my unit? SDIO devices work as long as they are supported with Windows 6 drivers. An Extended Cap, sold as an accessory, can be used for oversized SD cards if your device does not have the camera or barcode scanner.

Can I work with Microsoft Office files in Word Mobile and Excel Mobile? Office Mobile applications are trimmed-down versions of the PC Microsoft Office applications and do not support all of the features that are supported by the PC applications. You can view simple documents and make simple changes on your unit.

Can I use my USB memory stick (or mouse, keyboard, cell phone or other USB device) with my unit? Connecting peripheral devices via USB requires the USB I/O Boot. Many USB devices may work. Check with the device manufacturer to see if the device is supported under Windows Mobile. Special drivers may need to be installed.

Caring for your Unit

Case vent hole: A Gore-Tex membrane is used at the vent hole to equalize the atmospheric pressure within the unit and to prevent dust, water, etc. from entering. The vent must remain clear of any obstruction. Damage to the touchscreen will occur if the vent is covered. Covering the vent with stickers and labels may void the warranty.

Cleaning the unit: Use a soft, dampened cloth with either water or a diluted mild detergent. If a mild detergent is used, ensure all soap residue is removed. **Do not use any chemical cleaners and do not put the unit in the dishwasher.**

Care of the touchscreen: Use only the included stylus or other devices specifically designed for use with touchscreens. **DO NOT** use the metal screwdriver end of the stylus on the touchscreen or it will scratch your screen. Only use the spring-tip end of the stylus.

The use of ballpoint pens, nails or other sharp objects to operate the touchscreen will scratch and/or damage the unit. Keep the touchscreen clean by gently wiping the display, using a soft, dampened cloth with either clean water or glass cleaner.

Do not use abrasive cleaners directly on the display. Doing so may void your warranty. Use the screen protectors included with the unit to keep the touchscreen clean and protected, following the instructions provided on the screen protector package.

Mechanical shock: The unit is designed to resist damage for drops up to 4 ft (1.22 meters). However, you should protect the display from impact, pressure, or abrasive substances that can scratch it or crack it. The unit should not be dropped unnecessarily.

Environmental Considerations

The unit's rugged design allows you to run your applications in harsh outdoor environments. Here are some considerations that will help you get the most out of your unit when working in very wet, hot or cold conditions.

Water: This unit is designed to withstand accidental immersion. To maintain the unit's water resistant seal, it is important that the cap screws are fastened. Keep the bottom boot and its connectors as dry as possible. If the boot does get wet, dry off the contacts as much as possible. If your device is subjected to corrosive environments (i.e. salt water, dust, limestone, or corrosive liquids) we recommend rinsing in tap water daily to maximize the life of your product. Removal of the back case torx screws or failure to reattach the cap or boot could cause leakage and may void your warranty.

Temperature range: The operational temperature range is from -22 °F to +140 °F (-30 °C to +60 °C). The operational temperature range for the WWAN units is from -4 °F to +140 °F (-20 °C to +60 °C). Although the unit is designed to be rugged, do not leave it in direct sunlight or in a vehicle in the sunlight for extended periods.

Batteries perform best at room temperature. The battery has a stable capacity as temperatures rise; however, the colder the temperature, the greater the reduction in available battery life. Under very cold conditions (-4 °F / -20 °C and below), the battery life will be shortened. To improve the battery performance in very cold conditions, consider carrying a fully charged, spare battery in a warm place (for instance, keeping them inside your coat). The unit is designed for battery replacement to be easily done.

Environmental Specifications

TEMPERATURE **WWAN UNITS**	Operation: -22 °F to +140 °F (-30 °C to +60 °C) Storage: -40 °F to +158 °F (-40 °C to +70 °C) Operation: -4 °F to +140 °F (-20 °C to +60 °C) Storage: -4 °F to +122 °F (-20 °C to +50 °C)
SHOCK	MIL-STD-810F, Method 503.4
HUMIDITY	MIL-STD-810F, Method 507.4
WATER	IP67, sealed against accidental immersion (submersible to 1 meter for 30 minutes), MIL-STD 810F, Method 512.4, Procedure 1
DROP	MIL-STD-810F, Method 516.5, Procedure IV 26 drops @4 ft. (1.22 m) onto plywood over concrete; 6 drops @-22 °F (-30 °C), 6 drops @+140 °F (+60 °C)
SAND AND DUST	IP67, sealed against dust, MIL-STD 810F, Method 510.3, Procedure I & II
VIBRATION	MIL-STD 810F Method 514.5, Procedure I & II
ALTITUDE	MIL-STD 810F, to 15,000 ft (4572 m) at a nominal temp. of +73 °F (+23 °C), Method 500.4, Procedures I, II, & III
EMI	Meets FCC class B requirements
ROHS COMPLIANT	This product complies with international RoHS regulations

Hardware Specifications

OS	Windows Mobile 6.1
CPU	Marvel PXA320 XScale 806 MHz
RAM (VOLATILE)	128 MB DDR SDRAM
FLASH STORAGE	512 MB to 6 GB of nonvolatile NAND Flash storage
DISPLAY	480 x 640 pixel (VGA) color TFT with LED backlight
KEYPAD	PDA or Data Numeric
BATTERY LIFE	15 hours continuous room temperature operation with default settings and no use of embedded radios
BATTERY CHARGING	4 to 4.5 hours to full charge
BATTERY CAPACITY	5200 mAh Li-Ion rechargeable
POWER SUPPLY	Cincon TR30RAM050. Output DC 5.0 V 4.0 A
POWER	Input: DC 5.0 V 4.0 A
I/O BOOTS	USB Boot: Mini-USB client, USB host, Audio Jack, Power Serial Boot: Mini-USB client, RS-232 serial (9-pin), Power
SOUND	Integrated sealed speaker and microphone. Audio jack is for a headset with mono speaker and microphone
EXPANSION PORTS	**Standard:** SD slot, CF Type II or USB **Color Digital Camera:** SD slot, Camera (5 megapixel) **Barcode Scanner & Camera:** SD slot, Scanner, Camera
INTEGRATED WIRELESS	All units have Integrated Bluetooth Optional Wireless WAN, Wi-Fi and GPS

Regulatory Information

U.S.A.

This device complies with Part 15 of the FCC Rules. It is tested to comply with FCC standards for home or office use. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Canada

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications. Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

Exposure to Radio Frequency (RF) Signals

Your device contains a radio transmitter and receiver. The radiated output power is far below the international radio frequency exposure limits. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on the safety standards previously set by international standards bodies:

- American National Standards Institute (ANSI) IEEE. C95.1-1992.
- National Council on Radiation Protection and Measurement (NCRP). Report 86. 1986.
- Int'l Commission on Non-Ionizing Radiation Protection (ICNIRP) 1996.
- Ministry of Health (Canada), Safety Code 6. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

Use of unauthorized or modified antennas may impair call quality and damage the phone, causing loss of performance. To assure optimal phone performance and ensure human exposure to RF energy is within the guidelines set forth in the relevant standards; always use your device only in its normal-use position. Avoiding contact with the antenna area when the phone is IN USE optimizes the antenna performance.

Carrying the unit

For body worn operation, this phone has been tested and meets the FCC RF exposure guidelines when used with accessories supplied or designated for this product. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

SAR Frequency (MHz)	Highest Multiband SAR Value (1g mW/g)
824-849	1.290
1850-1910	0.521
2400-2483.5	0.099

Declaration of Conformity

Europe

According to ISO / IEC Guide 22 and EN 450 14

Manufacturer's Name: Trimble Navigation Limited.

Manufacturer's Address: PO Box 947, Corvallis, OR 97339 USA

Declares, under our sole responsibility, that the product:

Product Name:	Handheld Data Collector
Model Number:	Nomad
Product Options:	ALL

conforms to the following Product Specifications:

R&TTE Directive 1999/5/EC	EN 61000-3-2 (2000)
ETSI EN 300 328 V1.6.1 (2004)	EN 61000-3-3 (2001)
ETSI EN 301 489-1 V1.5.1 (2004)	EN 61000-4-3 (2002)
ETSI EN 301 489-17 V1.2.1 (2002)	EN 61000-4-2 (2001)
EN 55022 (1998)	EN 61000-4-4 (2004)
CISPR 22 (2005)	EN 61000-4-5 (2001)
EN 55024 (1998), Amendments A1:2001, A2:2003	EN 61000-4-6 (2004)
EN 60950-1 (2001)	EN 61000-4-11 (2004)
CFR 47, Part 15, Subpart B	

Supplementary Information:

In addition, the product is battery powered and the power supply provided with this product has been certified to IEC 60950 +A1, A2, A3, A4, A11.

As manufacturer, we declare under our sole responsibility that the equipment follows the provisions of the Standards stated above.
Corvallis, OR USA

Importer of Record: Trimble European Regional Fulfillment Center,
Logistics Manager, Meerheide 45, 5521DZ Eersel, Netherlands.

CAUTION: Only approved accessories may be used with this equipment. In general, all cables must be high quality, shielded, correctly terminated and normally restricted to two meters in length. Power supplies approved for this product employ special provisions to avoid radio interference and should not be altered or substituted.

Unapproved modifications or operations beyond or in conflict with these instructions for use may void authorization by the authorities to operate the equipment.

Safe Use of your Unit

Repair: Do not attempt to dismantle the unit for repair. There are no user-serviceable parts inside. For service, use the contact details listed on the cover of this manual or contact your local dealer.

Battery safety: Lithium-Ion batteries are classified by the U. S. Federal Government as non-hazardous waste and are safe for disposal in the normal municipal waste stream. These batteries contain recyclable materials and are accepted for recycling.

1) Do not disassemble or open, crush, bend or deform, puncture, or shred the battery. There are no user-serviceable parts in the battery pack.
2) Do not modify or remanufacture, attempt to insert foreign objects into the battery, immerse or expose to water or other liquids, or expose to fire, explosion, or other hazard. Do not expose to temperatures above +158 °F (+70 °C).
3) Use only the battery for the system for which it was specified.
4) Only use the battery with a charging system that has been qualified with the system per this standard. Use of an unqualified battery or charger may present a risk of fire, explosion, leakage, or other hazard.
5) Do not short circuit a battery or allow metallic or conductive objects to contact the battery terminals.
6) Replace the battery only with another battery that has been qualified with the system per this standard. Use of an unqualified battery may present a risk of fire, explosion, leakage, or other hazard.
7) Promptly dispose of used batteries in accordance with local regulations.
8) Battery usage by children should be supervised.
9) Non approved batteries will not function in the device.
10) Avoid dropping the unit or battery. If dropped, especially on a hard surface, and the user suspects damage to the battery, take it to a service center for inspection.
11) Improper battery use may result in a fire, explosion, or other hazard.
12) In the event of a battery leak, do not allow the liquid to come in contact with the skin or eyes. If contact has been made, wash the affected area with large amounts of water and seek medical advice.
13) Seek medical advice immediately if a battery has been swallowed.

Power supply safety

Use only AC and vehicle adapters intended for the unit. Other external power sources may damage your product and void the warranty. Certification of this Class III product is only valid with the power supply - Cincon TR30RAM050.

- Ensure the input voltage on the adapter matches the voltage in your location. Ensure the adapter has prongs compatible with your outlets.
- The power supply is designed for **indoor use only**. Avoid using the power supply in wet areas.
- Unplug the power supply from power when not in use.
- Do not short the output connector.

Telecommunications & Internet Association (TIA) information

Hearing Aids: Some digital wireless phones may interfere with some hearing aids. In the event of such interference, you may want to consult your service provider, or call the customer service line to discuss alternatives.

***Pacemakers and Other Medical Devices*:** The Health Industry Manufacturers Association recommends a minimum separation of six inches be maintained between a handheld wireless phone and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with the independent research by and recommendations of Wireless Technology Research. Persons with pacemakers should use the ear opposite the pacemaker to minimize the potential for interference. If you have any reason to suspect that interference is taking place, turn the phone OFF immediately.

If you use any other personal medical device, consult the manufacturer of your device to determine if they are adequately shielded from external RF energy. Your physician may be able to assist you in obtaining this information.

Turn the phone OFF in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

Environmental Hazards

The product complies with international RoHS regulations.

有毒有害物质和元素

Toxic and Hazardous Substances and Elements

部件名称 Part Name	铅 Lead (Pb)	汞 Mercury (Hg)	镉 Cadmium (Cd)	六价铬 Hexavalent Chromium (Cr6+)	聚溴联苯 Poly-brominated biphenyls (PBB)	聚溴二苯醚 Poly-brominated diphenyl ethers (PBDE)	
印制电路组件 Printed Circuit Assemblies	X	O	O	O	O	O	
显示 Display	X	O	O	O	O	O	
键盘 Keypad	X	O	O	O	O	O	
住房 Housing	O	O	O	O	O	O	
硬件 Hardware	O	O	O	O	O	O	

Product Period does not include these items

电池 Battery	X	O	O	O	O	O	
交流适配器 Power supply	X	O	O	O	O	O	
电缆 cable	O	O	O	O	O	O	
开始指南 Manual	O	O	O	O	O	O	
手带 Hand strap	O	O	O	O	O	O	
触控笔包 Stylus pkg.	O	O	O	O	O	O	
随带光盘 Companion CD	O	O	O	O	O	O	

NOTICE for Our European Union Customers

For product recycling instructions and more information, please go to: www.trimble.com/env.

Recycling in Europe:
To recycle WEEE (Waste Electrical and Electronic Equipment products that run on electrical power), call +31 497 53 24 30 and ask for the "WEEE Associate."

Or
Mail a request for recycling instructions to:
Trimble Europe BV
c/o Menlo Worldwide Logistics
Meerheide 45
5521 DZ Eersel, NL

This product complies with international regulations for Restriction on Hazardous Substances Directive (RoHS)

Windows Mobile:
www.microsoft.com/windowsmobile/default.mspx

Section 508 Support: Download accessibility templates for our products.
www.Trimble.com/section508

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